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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,430	03/29/2001	Mitchell M. Jackson	3085R	5042

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08/13/2003

THE LUBRIZOL CORPORATION
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EXAMINER

MEDLEY, MARGARET B

ART UNIT

PAPER NUMBER

1714

14

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A 314

Office Action Summary

Application No.

09/820,430

Applicant(s)

JACKSON ET AL.

Examiner

Margaret B. Medley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15, 18, 19 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 18-19 and 31-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This action is in response to Paper No. 13 dated June 6, 2003.

Applicants' amendment in Paper No. 16 canceling claims 1-14 and 20-30, amending claims 15 and 18-19 and adding claims 31-42 has been entered of record.

The pending claims of record are claims 15, 18-19 and 31-42.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15, 18 and 31-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art as applied to claims 15,18-26, and 29-30 in the last office action, and further in view of Avery et al (Avery) EP 0,869,163 A1.

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Applicants make admission on record, the last paragraph at page 1 of the instant specification, that prior art Fuentes-Afflick et al (Fuentes-Afflick) EP 09/497,576 A1 (sic EP 0,947,576 A1) discloses fuel compositions that include aliphatic hydrocarbyl substituted amines and/or polyetheramines and esters of carboxylic acids and polyhydric alcohols to improve fuel economy.

A careful study of Fuentes-Afflick discloses that patentee teaches a fuel composition comprising gasoline and a fuel additive composition comprising (a) at least one amine compound selected from (1) an aliphatic hydrocarbyl-substituted amine and (2) a poly (oxyalkylene) amine; and (b) an ester of a carboxylic acid and a polyhydric alcohol, abstract, page 3, lines 9-24. Patentee further provides for the further inclusion of other fuel additives in fuel, including detergents page 10, lines 34-37. The preferred organic solvents for the fuel additive include aromatic hydrocarbon alone or in combination with the aromatic solvents, page 10, and line 26-31.

Fuentes-Afflick further teaches that the unique combination of an aliphatic hydrocarbyl-substituted amine or a poly (oxyalkylene) amine, note claim 15 and page 5, line 40 to page 8, line 35, and an ester of a carboxylic acid and a polyhydric alcohol, preferably glycerol monooleate, page 10, line 9 and page 9, line 33 to column 10, lines 1-10, significantly reduces fuel consumption in an internal combustion engine (ICE) and unexpectedly provides a greater reduction in friction than either component by itself, page 3, lines 28-31.

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Patentee further provides a method for reducing fuel consumption in an ICE, which comprises operating the engine with the said fuel composition, page 3, lines 26-27 and claim 36.

The gasoline composition and method of Fuentes-Afflick render obvious instant claims 15, 18 and 31-39. With respect to claim 37 being a mixture of mono and dioleate of glycerol, it is the examiner's position that commercial available glycerol mono-oleate contains dioleate glycerol as impurities. With respect to claims 32 and 33 Fuentes-Afflick teaches that a typical secondary amines which may be used that includes N,N-di-(2-hydroxyethyl)amine, etc, note page 5, line 5 to column 6 lines 1 and 7-8 which clearly teaches the alkoxylated amines of the instant claims 32 and 33 rendering the said claims obvious.

Applicants made admission on record at paragraph 5 on page 1 of the instant specification that prior art Schilowitz US 5,968,211 discloses lubricity additive concentrates that include esters of fatty acids and alkoxylated amines.

A careful study of Schilowitz discloses that fatty acids, oligomers of such acids and the esters of such acids, are useful as anti-friction and wear reducing additives in gasoline and diesel fuels that are formulated into an additive concentrate which remains liquid at low temperatures of down to about 0° F (-17.78° C) by the additional presence in the concentrate of an alcohol, an amine or a mixture of alcohol and amine. The fatty acids and their esters are typically derived from naturally occurring fats and oils and include those known as tall oil acids and their esters, note the bridging paragraph of columns 2-3. Patentee further discloses that an aromatic solvent is used in the

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concentrate with the said lubricity additive along with the said alcohol and/or amine, note column 2, lines 18-30. The Ethomeen C/12 is an ethoxylated cocoa alkylamine, note column 3, lines 31-32 and example 31, and is the same alkoxyated fatty amine of instant claims 20-21.

Schilowitz provides the motivation and teachings to select the aromatic and/or alcohol or amine solvent of Fuentes-Afflick with the reasonable expectation that the solvents will allow the concentrate composition to be a liquid at a temperature of about 0° C to minus 18° C.

Avery further teaches composition and a method for reducing friction in the operation of an internal combustion engine comprising delivering to the (ICE) a fuel comprising gasoline and a friction-reducing additive comprising a mixture based on a N,N-bis (hydroxyalkyl)-alkylamine and a detergent , preferably polyalkeneamines, a polyetheramine or a Mannich based condensation products, note abstract and page 2, lines 35-39 and 50 to page 3, line 11 and examples 1-4 and further provides for the further inclusion of a suitable carrier, page 4, lines 49-50. Avery further provides the motivation for the selection of alkoxyated fatty amines as the amines of Fuentes-Afflick and Schilowitz and the combining of nitrogen detergents with alkoxyated amines in the additive, fuel and method of Fuentes-Afflick combined with Schilowitz for reducing friction in the operation of the gasoline engine.

It would have been obvious to the artisan in the art with the combined teachings of the Admitted Prior Art and Avery that the artisan in the art would have selected a fuel composition comprising gasoline, a solvent comprising aromatic hydrocarbon, a mixture

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of alcohol and an aromatics hydrocarbon, a mixture of alcohol and an aromatic hydrocarbon that would allow the concentrate composition to be a liquid at a temperature of about 0°C to minus 18°C , to select an alkoxylated fatty amine having the formula of instant claims 32-33, and to select a partial ester having a free hydroxyl group having carbon atoms fatty carboxylic acid and glycerol of instant claims 38 to render obvious instant claims 15, 18 and 31-39. The prior art also teaches nitrogen-containing detergent, particularly polyetheramines, with partial ester rendering obvious the instant claims. The prior art also teaches adding the fuel to an ICE for the purpose of reducing fuel consumption that renders obvious instant claims 18. It is state of the art knowledge that energy is extract from an engine by combusting the fuel in an engine.

Claims 19, and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art as applied to claims 15, 18, and 31-39 above, and further in view of Wyman 3,250,715.

The Admitted Prior Art and Avery are silent to the polymeric pour point depressant of instant claims 19 and 40-42. However, the Admitted Prior Art provide for the further inclusion of conventional gasoline additives that would provide for the inclusion of a conventional pour point depressant. The teaching of Schilowitz that the gasoline additives are used at temperatures as low as -17.78°C provides the motivation for the selection of a pour point depressant that would be reasonable expected to be used with a fuel composition comprising aromatic hydrocarbon solvent at temperatures of about 0°C to minus 18°C that would experience thicken problems at such low temperatures.

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Wyman teaches a terpolymer formed by polymerizing a dialkyl fumarate, vinyl carboxylate, and a vinyl ether polymeric pour point depressant and are prepared as a polymer solution in benzene, column 1, lines 9-11, 42-47, 51-66 and column 3, lines 8-19 as a pour point depressant.

It would have been obvious to the artisan in the art to further add the pour point depressant of Wyman to the fuel composition of the Admitted Prior Art and Avery that has been known to be used at temperature as low as -17.78°C with the reasonable expectation that it would depress the pour point of the aromatic hydrocarbon at such low temperature of 0°C to minus 18°C that the polymer has been known to be useful to render obvious instant claims 19 and 40-42.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the last line of claim 19 the phrase "of claim 42 15" renders the said claim indefinite. However, in the interest of compact prosecution the said claim has been treated on the merits as being based solely on claim 42. Applicants are required to clarify the record as to the dependency of claim 19.

The previous 112 and obviousness-type double patent rejections are withdrawn in view applicants' amendments to the claims and cancellation of other.

Applicant's arguments with respect to claims 15, 18-19 and 31-42 have been considered but are moot in view of the new ground(s) of rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

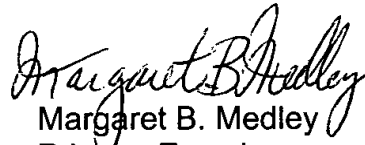
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is (703) 308-2518. The examiner can normally be reached on Monday--Friday from 7:30 a.m. to 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Margaret B. Medley
Primary Examiner
Art Unit 1714

August 8, 2003